

## **Overcoming an Intrinsic Depolarizing Resonance with a Partial Snake at the Brookhaven AGS**

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An 11.4% partial Siberian snake was used to successfully accelerate polarized protons through a strong intrinsic depolarizing spin resonance in the AGS without noticeable depolarization. The critical element of this operation is to maintain beam stability with a betatron tune close to an integer. This opens up the possibility of using a 20% to 30% partial Siberian snake in the AGS to overcome all weak and strong spin resonances. The design of a superconducting helical AGS snake with a strength of 20% to 30% has already begun.